**Proposed Topic**

# "Initiatives of E-Governance: With special reference to the framework for the Indian Higher Education System"

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# Initiatives of E-Governance:
# With special reference to the framework for the Indian Higher Education System

## Present state of knowledge and brief background

E-governance refers to the process of using Information Technology (I.T.) for automating the internal operation of the government and external interaction with citizen and other businesses. Automation of internal operation reduces its cost and improves their response time while at the same time allowing government processes to be more elaborate in order to increase their effectiveness. Automation of interaction with the citizens reduces the overheads for both the government and the citizens thus creating values for the economy e.g. an online service can be provided by the transport depts. For the renewal of driving licenses is a currently leading e-governance application in India. E-governance can also be defined as the application of electronic means in the following:-

- Monitoring the performance of various schemes started by government from time to time
- Interaction between government - citizens and government-business
- Simplification processes of the government
- Internal government operations to simplify and improve democratic, government and business aspects of governance

India has been harnessing the benefits provided by the Information and Communication Technologies (ICT) to provide integrated governance, reach to the citizens faster, and provide efficient services and citizen empowerment through access to information. The aim is to redefine governance in the ICT age to provide **S**imple, **M**oral, **A**ccountable, **R**esponsive and **T**ransparent Governance (SMART GOVERNANCE).

When we talk of the Indian **Higher Education System**, there is tremendous increase in the number of Colleges and Universities. It has become very important to the government to keep track of their functioning.

There are regulating agencies like UGC, AICTE, MCI, Pharmaceutical Council of India leads to duplication of procedure causing immense loss of time and resources. There should be a metric to assess the performance of the university on an overall basis. Some criteria may be progression of course, quality of faculty members, research facilities given to teachers and students, number of students, examination system and administration. On these metrics the universities and colleges are asked to explain the reason for good/bad performance. Presently the university has to submit the documents to UGC, MHRD, and AICTE separately.

In order to remove the duplication of procedures, there should be consolidated information about each university and college to track their performance. Ideally, a single window should exist for approval process of performance measurement. The tools of e-governance may enable the university/ college to submit the documents online for approval. All agencies should internally co-ordinate to fetch the document /detail from common pool. This would greatly reduce the unnecessary duplication of work in the university.

- Similarly, the difference between time of request for funds and disimbursement of funds leaves much to the forecasting and guess work. With the help of e-governance model, the process can be made automated or time bound. All details needed for the approval of funds can be fetched by centralized system.
- E- Governance system, by using centralized database of students, can help governing bodies to provide opportunity to bright students. The governing bodies can provide a common platform for best performing student and industry seeking employees to interact for jobs project research work etc. The governing bodies/ industry can very easily get the details of bright students all over in India in various fields
- E-governance is one such concept that can empower the government to administer the progress of education plan in the whole country.
- Governing bodies can empanel some of the organizations selected through a process to become key contributors providing inputs regarding the latest trends in the industry.
- Having all information about universities and their students would enable the governing bodies to analyze the trends and take the strategic decision in the future using Data warehousing and Data Mining techniques...

- The trend of demand of course or stream can be easily tracked as and when required when universities are linked and information about all the students and the opted courses are centralized, governing bodies can very easily develop a mechanism to analyze which course is in heavy demand in a particular area or region.
- The information can help the government in analyzing employment versus passing graduates ratio. Government can plan the generation of employment according to the passing graduates in the country.
- The fund utilization by College /University can be monitored online and analyzed even on monthly basis.
- E-governance interface can be used to get the feedback from the students related to course and performance of university, this will help to keep an eye on the institute in remote areas and help them in developing fully.
- E-governance will remove the need of Transfer certificates /Migration , if the student wants to transfer or take fresh admission and reduce unnecessary administrative work and paper work
- An online grievance redresser system can be made in case of some grievances with the College/University.
- Interlinking of universities will enable regular updating of curriculum. Common curriculum can also be improvised.
- E-governance initiatives will also include interventions for personnel and office management in the university such as Employee Information system, transfer posting module, finance module etc. Following type of Information will be very easily available online like:
    - Total enrollment in a year
    - Intake in technical courses, intake in Arts, Science and Commerce stream
    - Information about Faculty strength.
    - Ph.D. awarded in a year.
    - Higher education expenditure.
    - NAAC/UGC/NCTE/MCI/BCI recognition/ accreditation Status.

- To achieve privatization without commercializing education, two effects are necessary:
  (a) Students must be admitted into education institutions on the basis of some objectives criteria which would include the reservation for weaker section. Presently, most of the institutes are not following the rules by hiding the data which will not be possible after centralized system.
  (b) Private institute should be able to charge adequate fees in transparent way without indulging in profiteering.

The idea is to deliver services at the doorstep making it hassle free transparent and facilitate decision makers to get all analysis and decide. As a result of such type of governance, there may be perceptible changes in both administrative and academic output of the department. With human intervention and discretion being minimized resulting in a fair, transparent accountable and responsive system. Similar to e-governance mode there can be a centralized e-library, e-examination and e-evaluation system.

## Proposed work and Methodology:

(a) In e-governance , citizen services, which are Web Services, can be effectively supported by a grid of Data Centers and networks which connect them up to the kiosks at village levels. This enables us to conceptualize an e-governance grid for India as a backbone architectural framework for the purpose of effective citizen service delivery.

(b) The overall objective of this research work is to develop a technological framework of E-governance model for integration of higher education system at a National level which can be one of the key initiatives in the field of e-governance. The system can provide deep visibility to governing bodies at university and student level to analyze the performance.

Use the Modeling language for frame-work (may be object-Oriented Model/UML/AGILE, etc.

(c ) This model is intended for studying and critically analyzing the present functioning of government in higher education system especially with interface to universities and colleges and develops a framework to exploit ICT for efficient, effective and transparent government.

In order to achieve the above objectives, the following is the plan of proposed work:

1. **To study the similar type of existing system of e-governance:**
2. **To analyze the system and identify the bottle neck.**
3. **To determine and analyze the data (using data warehousing techniques) required by the government in the present system of higher education.**

After achieving the above objectives, it is proposed to design a technological framework of e-governance model for higher education system in India.

## Review of Literature

The state of Indian higher education has been examined by a number of education commissioners and committee that have identified the major problems and suggested the remedial actions [1]. The system of affiliation of colleges, followed by most universities, which centralizes decision and discourages accountability. I.T. being dynamic in nature has a strong potential to improve and mange different aspects of higher education successfully. It can bring revolutionary changes in the realm of education besides promoting equity, better quality and lowering the overall economics of education.

The researchers [2] provides a detailed study about CAPNIC. CAPNIC is a software application developed by NIC used to allot seat for professional course in Kerela. It is an open source solution based on Linux, Apache, My SQL, and PHP.In his work the candidate's choice of the college and courses are received online. The same options are used for allotment/re allotment of the seats. About 28 lakhs options are received from 55000 candidates. The system handled transaction for an amount of more than 60 crores of rupees. The candidate has been given the option of changing the preference at any time. The government colleges, citizens are saving lot of money and time by adopting the new system.

The author Satyanarayana [3] gave the fundamental difference between the computerization and E-governance. The former seeks to replace existing processes by their electronic counterparts. The latter looks at the needs of citizens and introduces systems that can precisely meet those needs. It is the difference between citizen centric and computer centric.

Pannervel P. [4] specifies the aim of E-governance is to provide greater access to information, to promote participation in the decision making process by creating more opportunities for people to interact, to increase transparency that can result in increased public sector accountability and reduced opportunities for corruption and to achieve efficiency through cost and time savings.

The author has also givendetailed study about hardware and software integration, and elaborated that most of the government employees believe that once the front end screen is ready, it means that total computerization of the department is ready for operation. They are not aware that the system would not work without the backend support and network. Therefore, more often IT gurus advocate for in-house system design and development to familiarize the employee.

The data warehousing can primarily provide categorical structure for static data and variable data. Any addition of variable data to certain static data would enable automatic conversion of the static data to influencing data. Data structure would further enable automatic modification of relevant database.

The database structure should have multidimensional processing pattern tailored not only to the need of the departments but also the end users i.e. the citizens.

Everyone associated with higher education institution like institutional members, parents, students, employees, funding bodies and the government in other words, the stakeholders would be interested in one question about the institutions: "What is the quality of education offered in higher education institutes?" The stakeholders raise these questions with one or more interest: students for choice of institution: Parent for worth of personal investment in the education of their wards; Government accountability and policy making; funding agencies for funding decisions. To find an answer to the questions on institutional quality, these stakeholders depend on various sources of data.[5].

The UGC has woken up belatedly to seize the standard of higher education from sliding down[6] the assessment and evaluation are basically intended to measure institutional effectiveness.

At present there are several categories of educational institutions in our country which conducts different types of professional programmers. The admission process in majority of the cases is not monitored properly which leaves a scope for the institution to admit students at their own. This is grossly misused by them.

Accountability is something that differentiates a public organization from other types of organizations. Accountability [7] also represents a preferred area for reflection in the field of e-governance. Transparency is related to the volume and quality of information provided to the public administration activities. This information may refer to both services and specific processes and in this case may contain both personal and aggregate information, and processes of decision making or the mechanism of implementing public notices.

Application developers in e-governance have to work at low level of abstraction .This means taking care of low level issues such as interprocess messaging tools, integration and data modeling while defining the application logic. Similarly solution reconfiguring and management requires the solution administrator to have a detailed understanding of application logic, making the task time consuming and error prone [8]. In solution to date, each e-governance solution has customized existing products to address an individual government agency requirement..

E-government index of global leaders given in [9],shows user actions triggers processes with in the delivery mechanism that results in the services rendered by enterprises, which fall in distinct sectors of government.

Ashok Agrawal [10] focused on three broad identifiable scenario of evaluation :

E-readiness of the context performance of specific e-government project and overall impact of e-government on various developmental factors. A flexible framework is suggested to choose an appropriate strategy to measure the tangible and intangible benefits of e-government. The framework provided is by no means optimal. Based on

different ideas, the framework can be changed for which grading and subsequently, various qualitative aspects of measurement could be used to meet the need.

Chawala et al [11] studied the project of online delivery of land records in Karnataka. Farmer had to seek out the village accountant to get a copy of the records of rights,

Ramchandran Vilasini, e-Dhara-Land Record Management System , a Software Package for e-Dhara project is based on client server architecture capable of running on windows platforms.

"National Portal of India"[12] has given the objective behind the portal to provide a single window access to the information and services provided by Indian government for its citizens. It caters to a wide range of target audience, and stakeholders right from common citizen, government department and the corporate sectors to NRI's , National and International media and general public across the world. According to authors these types of portals has fulfilled the basic objectives of electronic governance.

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Add work plan